UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,578	12/05/2003	Edwin Peter Dawson Pednault	YOR920030072US1	7351

21254 7590 08/31/2006

MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC
8321 OLD COURTHOUSE ROAD
SUITE 200
VIENNA, VA 22182-3817

EXAMINER	
KENNEDY, ADRIAN L	

ART UNIT	PAPER NUMBER
2121	

DATE MAILED: 08/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/727,578	PEDNAULT, EDWIN PETER DAWSON	
	Examiner	Art Unit	
	Adrian L. Kennedy	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/05/2003*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Examiner's Detailed Office Action

1. This Office Action is responsive to application **10/727,578**, filed **December 05, 2003**.

2. **Claims 1-26** have been examined.

Information Disclosure Statement

3. Applicant is respectfully reminded of the ongoing Duty to disclose 37 C.F.R. 1.56 all pertinent information and material pertaining to the patentability of applicant's claimed invention, by continuing to submit in a timely manner PTO-1449, Information Disclosure Statement (IDS) with the filing of applicant's application or thereafter.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-26 are rejected under 35 U.S.C 101 as being directed to nonstatutory subject matter. In particular claims 1-17 and 22-26 are considered to be directed to software and in accordance with "The Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility", Annex IV (a). It should be noted that the Guidelines provide a framework for the rejection, but it is the case law cited therein that provides the legal authority for this rejection. The claims do not set forth any structure whereby the functionality of the software may be realized. Accordingly, these claims do not define patent eligible subject matter.

Furthermore, claims 1-26 do not set forth a "useful, concrete and tangible result". In particular, it is not considered that these claims set forth a tangible result. Claims 1-26 do not produce a practical real world result.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-26 are rejected under 35 U.S.C. 102(e) as being anticipated by *Pednault et al.* (USPubN 2003/0176931).

Regarding claim 1:

Pednault et al. teaches

A predictive model method, comprising:

receiving an input data [Paragraph 0049; "*input values*"] into an initial model [P 0049; "*segmentation-based predictive model*"] to develop an initial model output [P 0054; "*output(s)*"]; and

receiving both of said input data [P 0049; "*input values*"] and said initial model output [P 0049; "*output values*"] as input data [P 0049; "*collection of training

data"] into a first transform [P 0047; "*transformations*"]/regression [P 0058; "*regression*"] stage [P0049; .

The examiner takes the position that "stages", as disclosed in the applicants', are equivalent to "segments" in the invention of Pednault et al. Additionally, Pednault et al. teaches that segments contain predictive models [P 0047; "*predictive models within each segment*"].

Regarding claim 2:

Pednault et al. teaches

The method further comprising:

providing an output [P 0050; "*generating a plurality of data segments*"] of said first transform/regression stage [P 0047; "*predictive models within each segment*"] as a first of two inputs [P0054; "*inputs*"] into a second transform [P 0047; "*transformations*"]/regression [P 0058; "*regression*"] stage [P 0049; "*segmentation-based predictive model*"],

wherein a second of said two inputs [P0054; "*inputs*"] comprises said input data [P 0049; "*collection of training data*"] into said initial model [P 0049; "*segmentation-based predictive model*"].

The examiner takes the position that by only disclosing "inputs" and not explicitly stating how many inputs are used, Pednault et al. anticipates the "two inputs" of the applicants' invention.

Regarding claim 3:

Pednault et al. teaches

The method of claim 2, further comprising:

successively providing, for one or more additional stages [P 0055; "*automatically constructing segmentation-based predictive models*"], an output of a preceding transform [P 0047; "*transformations*"]/regression [P 0058; "*regression*"] stage [P 0049; "*segmentation-based predictive model*"] as a first of two inputs into a next transform/regression stage [P 0049; "*segmentation-based predictive model*"], wherein a second of said two inputs [P0054; "*inputs*"] comprises said input data [P 0049; "*collection of training data*"] into said initial model [P 0049; "*segmentation-based predictive model*"].

The examiner takes the position the Pednault et al. teaches the connecting of multiple data segments [P 0063; "*generating pluralities of data segments can be accomplished in a top-down fashion*"]. Additionally, the examiner takes the position that by only disclosing "inputs" and not explicitly stating how many inputs are used, Pednault et al. anticipates the "two inputs" of the applicants' invention.

Regarding claim 4:

Pednault et al. teaches

The method wherein said first transform/regression stage comprises:

a feature transform [P 0454; "*transforming the values of the input features*"] stage [P 0047; "*segment*"] receiving said input data [P 0049; "*collection of training*

data"] and said initial model [P 0049; "*segmentation-based predictive model*"] output [P 0054; "*output(s)*"];

a linear regression [P 0454; "*linear regression*"] stage [P 0047; "*segment*"] receiving an output of said feature transform stage [P 0454; "*linear regression equation would be constructed from derived input variables* $x_1, \ldots, X_L$ *that are obtained by transforming the values of the input features*"]; and

an output summing [P 0428; "*merge-with-model*"] node receiving as inputs said initial model output and an output of linear regression stage, an output of said output summing node comprising a first stage model output [P 0428-0430; "*merge-with-model*" process].

The examiner takes the position that the inputting of previously output data and the data that was input into the initial model is equivalent to the method of Fig. 34 and the object of Fig. 33 in the invention of Pednault et al. Additionally, the comparison of current model output to desired model output is an inherent part of the invention of Pednault et al.

Regarding claim 5:

Pednault et al. teaches

The method of claim 4, further comprising:

successively providing, for one or more stages [P 0055; "*automatically constructing segmentation-based predictive models*"], an output of a preceding

transform/regression stage [P 0047; "*segment*"] as a first of two inputs into a next transform/regression stage [P 0047; "*segment*"],

wherein a second of said two inputs [P0054; "*inputs*"] comprises said input data [P 0049; "*collection of training data*"] into said initial model [P 0049; "*segmentation-based predictive model*"].

The examiner takes the position that by only disclosing "inputs" and not explicitly stating how many inputs are used, Pednault et al. anticipates the "two inputs" of the applicants' invention.

Regarding claim 6:

Pednault et al. teaches

The method wherein for each said one or more stages, a third input into said next transform/regression stage comprises an output of said linear regression stage of said preceding transform/regression stage, and, for each said transform/regression stage, an output of said linear regression stage for said linear regression stage is carried forward to be an input into all successive transform/regression stages [P 0450; "*A forward step-wise variable selection method is employed in which regression variables are introduced one at a time so as to maximally improve the degree-fit-score*"].

The examiner takes the position that by only disclosing "inputs" and not explicitly stating how many inputs are used, Pednault et al. anticipates the "two inputs" of the applicants' invention.

Regarding claim 7:

Pednault et al. teaches

The method comprising:

avoiding an overfitting [P 0047; "*prevent overfitting*"] in said predictive model by determining when a successive stage does not add to a performance of said predictive model.

Regarding claim 8:

Pednault et al. teaches

The method wherein said determining of performance degradation comprises a holdout method, said holdout method comprising:

dividing an available data into a training set [P 0271; "*training data*"] and a holdout data set [P 0271; "*holdout validation data*"];

using said training set to estimate a model parameter [P 0271; "*effective degrees of freedom*"] and to construct an alternative model structure [P 0271; "*choices among alternative segment models*"]; and

using said holdout data set [P 0271; "*holdout validation data*"] to make a selection among said alternative model structure [P 0271; "*making a globally optimal choice among alternative segmentation and segmentation models*"].

Regarding claim 9:

Pednault et al. teaches

The method wherein said determining of performance degradation comprises a cross-validation method, said cross-validation method comprising:

dividing [P 0419; "*divide that interval into subintervals*"] an available data [P 0419; "*data record*"] into a plurality of folds of data; and

successively, using each said fold as a holdout data set [P 0418; "*associated with each data record should be a flag indicating whether or not that data record is part of a hold-out validation set*"], and a remaining data not in said fold is used as a training data set to estimate model parameters [P 0071; "*The latter can be estimated, for example, by applying the models to hold-out data not used for training*"] and to construct alternative model structures [P 0057; "*segment models are then constructed*"] and said training data [P 0130; "*training data*"] set is used to make a selection among said alternative model structures[P 0149; "*selecting among alternative segmentations and segment models*"].

Regarding claim 10:

Pednault et al. teaches

A predictive modeling method, comprising:

establishing an initial model module to instance an initial model [P 0257; "*initial generalized tree*"]; and

establishing a stage model module to instance a stage model for each of a plurality of successive stages [P 0055; "*automatically constructing segmentation-based predictive models*"], wherein each instanced stage model receives, as an input, an

output from a preceding stage model, and each said instanced stage model provides a stage model output that is used as an input into any next successive instanced stage model.

The examiner takes the position the Pednault et al. teaches the connecting of multiple data segments [P 0063; "*generating pluralities of data segments can be accomplished in a top-down fashion*"]. Additionally, Pednault et al. teaches the output of a model via a merging process, whereby a current models output is merged with a previous model to produce an optimized model [P 0259-0260].

Regarding claim 11:

Pednault et al. teaches

The method wherein each said stage model feeds forward a second output as another input into all succeeding stage models [P 0450; "*A forward step-wise variable selection method is employed in which regression variables are introduced one at a time so as to maximally improve the degree-fit-score*"].

Regarding claim 12:

Pednault et al. teach

The method of claim 10, further comprising:

instancing said initial model [P 0257; "*initial generalized tree*"];

instancing a first stage model [P 0049; "*segmentation-based predictive model*"] that receives an output data from said initial model as an input data and to provide a first stage model output;

successively instancing one or more of said stage models to be successive stage models, wherein a first successive stage model receives said first stage output data as an input data and provides an output data to be an input data to a second successive stage model, if any, and each successive stage model, if any, receives a stage output data from an immediately preceding successive stage mode and each successive stage model provides a stage output data to become an input data to a next successive stage model; and

providing an input data [P 0049; "*collection of training data*"] as inputs to said initial model [P 0049; "*segmentation-based predictive model*"], said first stage, and each said successive stage model.

The examiner takes the position the Pednault et al. teaches the connecting of multiple data segments [P 0063; "*generating pluralities of data segments can be accomplished in a top-down fashion*"]. Additionally, Pednault et al. teaches the output of a model via a merging process, whereby a current models output is merged with a previous model to produce an optimized model [P 0259-0260].

Regarding claim 13:

Pednault et al. teaches

The method comprising:

determining when an additional successive stage would not add to a performance of the predictive model [P 0144; "*maximize the predictive accuracy*"].

The examiner takes the position that Pednault et al. determines whether additional stages will increase predictive accuracy by determining if the predictive accuracy has been maximized.

Regarding claim 14:

Pednault et al. teaches

The method, wherein said determining of performance degradation comprises a holdout method, said holdout method comprising:

dividing [P 0130; "*the method first generates a plurality of data segments and associated segment models*"] an available data into a training set [P 0130; "*training data*"] and a holdout data set [P 0271; "*holdout validation data*"];

using said training set to estimate a model parameter [P 0132; "*model parameters of the segment models are optionally re-estimated*"] and to construct alternative model structures [P 0149; "*selecting among alternative segmentations and segment models*"]; and

using said holdout data set to make a selection among said alternative model structures [P 0220; "*The adjustments are appropriate only when the ValFit scores are calculated using hold out data*" and "*ValFit scores can be calculated and the final selection of a subset of nodes and alternative models at block 203 can be*

made"].

Regarding claim 15:

Pednault et al. teaches

The method wherein said determining of performance degradation comprises a cross-validation method, said cross-validation method comprising:

dividing [P 0130; "*the method first generates a plurality of data segments and associated segment models*"] an available data into a plurality of folds of data; successively, using each said fold as a holdout data set [P 0271; "*holdout validation data*"], and a remaining data not in said fold is used as a training data set [P 0130; "*training data*"] to estimate model parameters [P 0132; "*model parameters of the segment models are optionally re-estimated*"] and to construct alternative model structures [P 0057; "*segment models are then constructed*"] and said training data set [P 0130; "*training data*"] is used to make a selection among said alternative model structures [P 0149; "*selecting among alternative segmentations and segment models*"].

The examiner takes the position the Pednault et al. teaches the connecting of multiple data segments [P 0063; "*generating pluralities of data segments can be accomplished in a top-down fashion*"]. Additionally, Pednault et al. teaches the output of a model via a merging process, whereby a current models output is merged with a previous model to produce an optimized model [P 0259-0260].

Regarding claim 16:

Pednault et al. teaches

The method wherein said stage model comprises:

a first data input port;

a second data input port;

a feature transform [P 0454; "*transforming the values of the input features*"] stage receiving data from said first data input port and said second data input port;

a linear regression [P 0454; "*linear regression*"] stage receiving an output from said feature transform stage;

a summing [P 0428; "*merge-with-model*"] node receiving data from said first data input port and output data from said linear regression stage; and

an output port receiving data outputted from said summing node.

The examiner takes the position that although Pednault et al. does not explicitly disclose "input ports" and "output ports," these parts are inherent parts of the invention of Pednault et al. because they facilitate the reception of dispersion of various data. Furthermore, the examiner takes the position the Pednault et al. teaches the connecting of multiple data segments [P 0063; "*generating pluralities of data segments can be accomplished in a top-down fashion*"]. Additionally, Pednault et al. teaches the output of a model via a merging process, whereby a current models output is merged with a previous model to produce an optimized model [P 0259-0260].

Regarding claim 17:

Pednault et al. teaches

The method of claim 16, wherein said stage model further comprises:

a second output port to provide said output data [P 0049; "*output values*"] from said linear regression stage [P 0454; "*linear regression*"] to be a second output from said stage model; and

one or more input ports to receive data from said second output port of preceding stages to be input data [P 0049; "*input values*"] into said feature transform [P 0454; "*transforming the values of the input features*"] stage.

The examiner takes the position that although Pednault et al. does not explicitly disclose "input ports" and "output ports," these parts are inherent parts of the invention of Pednault et al. because they facilitate the reception of dispersion of various data. Furthermore, the examiner takes the position the Pednault et al. teaches the connecting of multiple data segments [P 0063; "*generating pluralities of data segments can be accomplished in a top-down fashion*"]. Additionally, Pednault et al. teaches the output of a model via a merging process, whereby a current models output is merged with a previous model to produce an optimized model [P 0259-0260].

Regarding claim 18:

Pednault et al. teaches

An apparatus to perform a predictive modeling method, said apparatus comprising:

an initial model module to instance an initial model [P 0257; "*initial generalized tree*"]; and

a stage model module to instance a stage model [P 0049; "*segmentation-based predictive model*"] for each of a plurality of successive stages,

wherein each said stage model receives an input from an immediately preceding stage and provides an output to a next succeeding stage.

The examiner takes the position the Pednault et al. teaches the connecting of multiple data segments [P 0063; "*generating pluralities of data segments can be accomplished in a top-down fashion*"]. Additionally, Pednault et al. teaches the output of a model via a merging process, whereby a current models output is merged with a previous model to produce an optimized model [P 0259-0260].

Regarding claim 19:

Pednault et al. teaches

The apparatus further comprising:

a controller to cause said initial model and each of a plurality of said successive stage models to be instanced and to interconnect said initial model and said plurality of successive stage models; and

a graphic user interface to allow a user to control said controller and said predictive modeling method, to input data into said initial model, and to one of display and print to one of a printer, a data file, and an application program the output of a final one of said successive stage models.

The examiner takes the position that the invention as claimed is broad enough to read upon a model running on a computer and a GUI for inputting information to control the

model. The examiner takes the position that interfaces implemented in C++ [P 0380; "*interface could be implemented in C++*"] are GUI interfaces. The fact that data is output ~~in~~ is inherent.

AG 8/30/06

Regarding claim 20:

Pednault et al. teaches

A signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to perform a predictive modeling method, said instructions comprising:

an initial model module to instance an initial model [P 0257; "*initial generalized tree*"]; and

a stage model module to instance a stage model [P 0049; "*segmentation-based predictive model*"] for each of a plurality of successive stages,

wherein each instanced stage model receives, as an input, an output from a preceding stage model, and each said instanced stage model provides a stage model output that is used as an input into a next successive instanced stage model.

The examiner takes the position the Pednault et al. teaches the connecting of multiple data segments [P 0063; "*generating pluralities of data segments can be accomplished in a top-down fashion*"]. Additionally, Pednault et al. teaches the output of a model via a merging process, whereby a current models output is merged with a previous model to produce an optimized model [P 0259-0260].

Regarding claim 21:

Pednault et al. teaches

> The signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to perform a predictive modeling method, said instructions comprising:
>
> > causing said initial model and each of a plurality of said successive stage models to be instanced and to appropriately interconnect said initial model and said plurality of successive stage models;
> >
> > allowing a user to control said controller and said predictive modeling method, to input data into said initial model, and to one of display and print to one of a printer, a data file, and an application program the output of a final one of said successive stage models;
> >
> > receiving input data [P 0324; "*input data fields*"; and
> >
> > allowing an output data of said predictive modeling method to be provided as output data.

The examiner takes the position that the invention as claimed is broad enough to read upon a model running on a computer and a GUI for inputting information to control the model. The examiner takes the position that interfaces implemented in C++ [P 0380; "*interface could be implemented in C++*"] are GUI interfaces. The fact that data is output ~~in~~ is inherent.

8/30/04

Regarding claims 19 and 21, Ferguson et al. (USPubN 2003/0033587) does teach the use of a controller [P 0139; "*a controller 1202, which may control a process*"] and a user interface [P 047; "*user interface*"]. However, Ferguson et al. does not disclose the outputting of data to a display, a printer, a data file and an application program.

Regarding claim 22:

Pednault et al. teaches

A method of providing a service, said method comprising at least one of:

providing an execution of a predictive modeling method, wherein said predictive modeling method comprises:

establishing an initial model module to instance an initial model [P 0257; "*initial generalized tree*"]; and

establishing a stage model module to instance a stage model [P 0049; "*segmentation-based predictive model*"] for each of a plurality of successive stages, wherein each instanced stage model receives, as an input, an output from a preceding stage model, and each said instanced stage model provides a stage model output that is used as an input into a next successive instanced stage model.

The examiner takes the position the Pednault et al. teaches the connecting of multiple data segments [P 0063; "*generating pluralities of data segments can be accomplished in a top-down fashion*"]. Additionally, Pednault et al. teaches the output of a model via a

merging process, whereby a current models output is merged with a previous model to produce an optimized model [P 0259-0260].

Regarding claim 23:

Pednault et al. teaches

A predictive modeling method, comprising:

using an initial model [P 0049; "*segmentation-based predictive model*"] that provides an initial model of input data [P 0049; "*collection of training data*"]; and using at least one successive stage model, each said successive stage model providing a cross-product interaction model.

The examiner takes the position the Pednault et al. teaches the connecting of multiple data segments [P 0063; "*generating pluralities of data segments can be accomplished in a top-down fashion*"]. Additionally, Pednault et al. teaches the output of a model via a merging process, whereby a current models output is merged with a previous model to produce an optimized model [P 0259-0260].

Regarding claim 24:

Pednault et al. teaches

A method of determining performance degradation in an iterative predictive modeling, said method comprising:

dividing [P 0130; "*the method first generates a plurality of data segments and associated segment models*"] an available data into a training set [P 0271; "*training data*"] and a holdout data set [P 0271; "*holdout validation data*"];

using said training set to estimate a model parameter [P 0271; "*effective degrees of freedom*"] and to construct alternative model structures [P 0271; "*choices among alternative segment models*"]; and

using said holdout data [P 0271; "*holdout validation data*"] set to make a selection among said alternative model structures [P 0271; "*making a globally optimal choice among alternative segmentation and segmentation models*"].

Regarding claim 25:

Pednault et al. teaches

A method of determining performance degradation in an iterative predictive modeling, said method comprising:

dividing an available data into a plurality of folds of data [P 0130; "*the method first generates a plurality of data segments and associated segment models*"];

successively, using each said fold as a holdout data set [P 0271; "*holdout validation data*"], and a remaining data not in said fold is used as a training data set [P 0130; "*training data*"] to estimate model parameters [P 0132; "*model parameters of the segment models are optionally re-estimated*"] and to construct alternative model structures [P 0057; "*segment models are then constructed*"] and said training data set is used to make a selection among said alternative model

structures [P 0149; "*selecting among alternative segmentations and segment models*"].

Regarding claim 26:

Pednault et al. teaches

A method for deploying computing infrastructure, comprising integrating computer-readable code into a computing system, wherein the code in combination with the computing system [P 0133; "*executing code*"].

Pednault et al. [P 0002] states that the invention is to computer databases and data mining. Both inherently require the use of a computer. Additionally, Pednault et al. states the invention is a "*computerized method*" [P 0046].

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. Ferguson et al. (USPubN 2003/0033587) is cited for his system and method for on-line training of a non-linear model. Ferguson et al. (USPubN 2003/0140023) is cited for his method of pre-processing input data to a non-linear model. Pednault (USPN 6,810,368) is cited for his mechanism for constructing predictive models. Natarajan (USPN 6,388,592) is cited for using simulated data to speed up predictive models. Hong et al. (USPN 7,020,593) is cited for his method for ensemble predictive modeling. Walter et al. (USPubN 2003/0088565) is cited for his system for mining large data sets. Golightly et al. (USPubN 2003/0046130) is cited for his method for real-time enterprise optimization. Fung et al. (USPubN 2004/0181441) is cited for

his method of model-based and data-driven analytic support. Tirpak et al. (USPubN 2005/0033719) is cited for his method for his method and apparatus for managing data. Nauk et al. (USPubN 2004/0249779) is cited for his method and apparatus for data analysis. Abe et al. (USPubN 2004/0015386) is cited for his method for sequential decision making for customer relationship management. Huang et al. (USPubN 2004/0019598) is cited for his binary tree for complex supervised learning. Eder (USPubN 2005/0119922) is cited for his method of analyzing, modeling and valuing elements of a business enterprise. Eder (USPubN 2004/0215551) is cited for his value and risk management system for multi-enterprise organization. Caplan et al. (USPubN 2005/0096950) is cited for his method for creating and evaluating strategies.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adrian L. Kennedy whose telephone number is (571) 270-1505. The examiner can normally be reached on Mon -Fri 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on (571) 272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ALK

Anthony Knight
Supervisory Patent Examiner
Technology Center 2100